

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended):A method for discriminating an optical disk
5 comprising:

operating a focus search for the optical disk to calculate a plurality of
peak values and a plurality of trough values of a plurality of signals;
determining a plurality of threshold levels for detecting a plurality of
material layers of the optical disk according to the peak values and
10 the trough values of the said signals; ~~and~~

repeating the focus search for the optical disk to calculate a plurality of
distances between the material layers of the optical disk according to
the plurality of threshold levels; and
discriminating the optical disk according to the calculated distances.

15 2. (original):The method of claim 1 wherein each threshold level is the
product of each peak value or each trough value and a predetermined
ratio.

20 3. (original):The method of claim 1 wherein the focus search operation is a
focus open-loop control method.

4. (original):The method of claim 1 wherein the signals are a sub-beam add
signal and a focus error signal.

25 5. (original):The method of claim 1 wherein the signals are an RF signal and
a focus error signal.

6. (original):The method of claim 5 wherein the step of repeating the focus search for the optical disk further comprising the step of detecting the RF signal first until a focus point approaches a first reflective layer by detecting the RF signal, and then detecting the focus error signal.

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7. (original):The method of claim 1 wherein the plurality of material layers includes a plastic layer and a first reflective layer.

8. (original):The method of claim 7 wherein the plurality of material layers
10 further includes a second reflective layer.

9. (currently amended):A method for discriminating an optical disk comprising:

15 operating a focus search for the optical disk to detect a plurality of peak values and a plurality of trough values of a first signal and a second signal wherein the peak values and the trough values are generated when detecting a plurality of material layers of the optical disk;
generating a plurality of threshold levels for detecting the material layers of the optical disk by multiplying each peak/trough value and
20 a corresponding ratio; ~~and~~
repeating the focus search for the optical to calculate a plurality of distances between the material layers of the optical disk according to the threshold levels; and
discriminating the optical disk according to the calculated distances.

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10. (original):The method of claim 9 wherein the focus search operation is a focus open-loop control method.

11. (original):The method of claim 9 wherein the first signal is a sub-beam
add signal and the second signal is a focus error signal.

12. (original):The method of claim 9 wherein the first signal is an RF signal
5 and the second signal is a focus error signal.

13. (original):The method of claim 12 wherein the step of repeating the focus
search for the optical disk further comprising the step of detecting the
RF signal first until a focus point approaches a first reflective layer of
10 the optical disk by detecting the RF signal, and then detecting the focus
error signal.

14. (original):The method of claim 9 wherein the plurality of material layers
includes a plastic layer and a first reflective layer.

15. (original):The method of claim 14 wherein the plurality of material layers
further includes a second reflective layer.

16. (currently amended):A method for discriminating an optical disk
20 comprising:

operating a focus search for the optical disk to detect a plastic layer of
the optical disk with a first signal; ~~and~~

detecting a first reflective layer of the optical disk with a second signal
when the first signal detects the first reflective layer-;

25 calculating a distance between a detected plastic layer and a detected
reflective layer; and

discriminating the optical disk according to the calculated distance.

17. (original):The method of claim 16 further comprising detecting a second reflective layer with the second signal if the second reflective layer of the optical disk exists.

5 18. (original):The method of claim 16 wherein the first signal is a sub-beam add signal and the second signal is a focus error signal.

19. (original):The method of claim 16 wherein the first signal is an RF signal and the second signal is a focus error signal.

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20. (original):The method of claim 16 wherein the first reflective layer exists when the first signal detects a first threshold value.

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21. (original):The method of claim 20 wherein a focus point passes through the first reflective layer when the first signal detects a second threshold value and then detects a third threshold value.

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22. (original):The method of claim 21 wherein the second threshold value is not equal to the third threshold value.

23. (original):The method of claim 17 wherein a focus point passes through the second reflective layer when the second signal detects a fourth threshold value and then detects a fifth threshold value.

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24. (original):The method of claim 23 wherein the fourth threshold value is not equal to the fifth threshold value.

25. (original):The method of claim 16 wherein the focus search operation is a

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focus open-loop control method.